



JET PROPULSION LABORATORY  
CALIFORNIA INSTITUTE OF TECHNOLOGY

# Request for Proposal

RFP NO.: JYC-572383

FOR:

**DEVELOPMENT TECHNOLOGIES FOR  
THE TERRESTRIAL PLANET FINDER MISSION**

**PROPOSALS ARE TO BE RECEIVED AT JPL NO LATER THAN:**

Date: June 27, 2003

Local Time: 3:00 p.m. PDT

## **COMMUNICATIONS IN REFERENCE TO THIS RFP**

It is requested that any communication in reference to this RFP be in writing and directed to the attention of:

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Title: JPL Contract Negotiator

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Date of Issuance: May 15, 2003

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### 2. Attachments to the RFP, See form JPL 2839 for a list of Attachments

This Section of this RFP consists of those forms and documents containing information applicable to this RFP. Group A Attachments must be completed and attached to your proposal. Group B Attachments consist of forms and documents for informational purposes only. Both A and B Attachments can be found through the electronic address identified below. Hard copies of the Group B Attachments will be mailed by request only. Note that Group B Attachments are very important and may become requirements under the Contract.

World Wide Web: <http://acquisition.jpl.nasa.gov/e2000.htm>

### 3. Draft of Statement of Work (SOW) and Delivery Schedule.

### 4. Exhibit I [Technology Plan]

## **GENERAL INSTRUCTIONS**

### **1.0 PROPOSAL REQUIREMENT**

The effort to be performed will be in accordance with the attached SOW and Delivery Schedule; if you choose to submit more than one proposal for this effort, each proposal must be independently complete and under separate cover.

### **2.0 PACKAGING AND SUBMITTING YOUR PROPOSAL**

#### **2.1 Organization and Format.**

- 2.1.1 Your proposal, which should be organized as closely as practicable to the format and sequence indicated in these proposal instructions, must be submitted as outlined below. Please note that JPL has assigned a recommended page limitation to the individual proposal sections. Please **submit 7 copies** of your proposal(s).

<u>Title:</u>	<u>Recommended Page Limit:</u>
Cover Page.....	1
Proposal Summary.....	1
Table of Contents.....	None
Technical Approach.....	10
Management Approach.....	2
Proposed Personnel .....	None
Copy of References.....	None
Facilities and Equipment.....	1
Current and Pending Support.....	1
Cost and Schedule.....	None

- 2.1.2 Unnecessarily elaborate brochures or presentation layouts, other than those sufficient to present a complete and effective proposal, are not desired. Except when specifically requested, mockups, models, samples, hardware, or software of any kind must not be furnished and will not be considered.

- 2.1.3 JPL reserves the right to retain all proposal information submitted in response to this RFP.

- 2.1.4 All proposals should be assembled with the following parts and in the order listed:

#### **2.1.4.1 Cover page that contains the following information:**

- 2.1.4.1.1 Name of this RFP;
- 2.1.4.1.2 Date of submission;
- 2.1.4.1.3 A proposal title;
- 2.1.4.1.4 The legal name and address of the organization and specific division or campus identification, if part of a larger organization;
- 2.1.4.1.5 Point of contact, mailing address, telephone number, FAX number, and e-mail address of the business office person at the Principal Investigator's sponsoring institution;

- 2.1.4.1.6 Proposing Principal Investigator's name and full institutional mailing address, telephone number, FAX number and e-mail address;
- 2.1.4.1.7 Principal Investigator signature and date;
- 2.1.4.1.8 The institutional endorsement, which requires the name and title of the authorizing institutional office, the full legal name of the proposing institution, signature of the authorizing individual, and date;
- 2.1.4.1.9 The designation of the type of proposing institution as certified on the Acknowledgment form [Attachment A-1 or Attachment A-5.]
- 2.1.4.1.10 Proposed costs.
- 2.1.4.2 Proposal Summary.
  - 2.1.4.2.1 A statement summarizing the potential capability of the proposed technology to satisfy the technology needs described in Exhibit I [Technology Plan];
  - 2.1.4.2.2 A brief description, including expected results or deliverables for the proposed technology, and a summary of its central features and predicted performance, and the proposed demonstration goals using terminology understandable to a non-specialist, and a concise statement of the proposed approach for demonstrating technology maturity;
  - 2.1.4.2.3 Pictorial material for the proposed technology that is suitable for public release NASA or JPL may publish the proposal title, the Principal Investigator's name and institution, summary description, and picture (or drawing) of every selected technology concept in a public forum. Therefore, the Proposal Summary should not include proprietary information that would preclude its unrestricted release.
- 2.1.4.3 Table of Contents.
- 2.1.4.4 Technical Approach (it is recommended to provide the technical details in the order as outlined in Volume I, Section 3.0)
- 2.1.4.5 Management Approach. (it is recommended to provide the technical details in the order as outlined in Volume II, Section 2.0)
- 2.1.4.6 Proposed Personnel.
 

A one-page resume for each of the key personnel who will support the proposed effort.
- 2.1.4.7 Copy of References
 

All referenced papers cited in the proposal shall be provided as an attachment to the proposal. For book citations, provide a copy of the relevant pages and the full title of the book and/or an easily understood abbreviation of the publication (e.g., library standard citation or AIAA format). If it is economical for the proposer to do so, this portion may be provided in PDF format on CD-ROM rather than paper copies.

#### 2.1.4.8 Facilities and Equipment.

This section should describe any facilities (including any U.S. Government owned facilities) and/or test or experiment equipment that are critical for carrying out the proposed effort. Discuss the availability of these special facilities and equipment items and any additional equipment or facilities that will be required. Costs shall be included in the proposal Budget Summary. Provide written substantiation (not included in the page count) from the government or other source showing concurrence with the proposed use.

#### 2.1.4.9 Current and Pending Support.

Briefly describe any current or planned sources of support that will be contributing to the proposed technology activity. Identify the ongoing and pending projects, sponsoring organization, relevance to the proposed technology, and the resources each organization will contribute or share.

#### 2.1.4.10 Proposed Cost and Schedule.

##### 2.1.4.10.1 Proposed Cost.

Provide a cost summary indicating the funding requirements for the proposed effort. Provide an explanation of the proposed funding arrangements. The Cost Proposal shall be submitted per the requirements of the attached draft Statement of Work and Delivery Schedule.

##### 2.1.4.10.2 Proposed Schedule.

Provide a detailed schedule of the proposed activities leading to delivery of the Final Report and Demonstration Hardware. Assume the start date given in the RFP.

#### 2.2 Address and Identification.

To help ensure timely receipt and processing of your proposal, please affix the enclosed yellow adhesive label to the envelope/container containing the complete original copy of your proposal. (NOTE: The yellow label is JPL's notification that the package you send is a proposal.) In case the mailing label is lost, address your proposal on a similar yellow label containing JPL's address, the name of the individual designated on the cover page of this RFP (including the mail stop) and the RFP number. All proposal envelopes/containers must be identified with the RFP number that appears on the RFP cover page.

#### 2.3 Hand Carried Proposals.

Hand-carried proposals must be delivered to the California Institute of Technology/Jet Propulsion Laboratory (JPL) Visitor Control Center, at 4800 Oak Grove Drive, Pasadena, Building 249, where it will be received and time-stamped. Visitor Control is open to receive proposals only on working weekdays, between 7:30 a.m. and 4:30 p.m. (proposals are due at the time and date stated on the cover of this RFP).

### 3.0 GENERAL INFORMATION

#### 3.1 Proposal Preparation and Related Costs.

This RFP does not commit JPL or the Government of the United States to pay any costs incurred in submitting your proposal, making studies or designs for preparing the proposal or in procuring or subcontracting for services or supplies related to the proposal.

3.2 Data.

If the proposal contains data that either you or your subcontractors do not wish to be disclosed for any purpose other than proposal evaluation, you must mark the cover sheet of each volume containing such information with the legend below:

3.3 “Data contained in pages \_\_\_\_\_ of this proposal furnished in connection with RFP No. JYC-572383 shall not be used or disclosed, except for evaluation purposes, provided that if a contract is awarded to this offeror as a result of or in connection with the submission of this proposal, JPL and the Government shall have the right to use or disclose this data to the extent provided in the contract. This restriction does not limit JPL’s right to use or disclose any data obtained from another source without restriction.”

3.4 Requests for Clarification/RFP Addenda.

During the proposal preparation period, all requests for clarification and/or additional information, must be submitted in writing to the individual referenced by “Attention:” on the cover page of this RFP. When appropriate, responses to requests, as well as any JPL initiated changes, will be provided to all prospective proposers in writing as addenda to the RFP. (NOTE: You must include reference to all addenda on your Acknowledgment to this RFP [Attachment A-1 or Attachment A-5].)

#### 4.0 LATE PROPOSALS

Any proposal, portion of a proposal, or unrequested proposal revision received at JPL after the time and date specified on the cover page of this RFP is late. Any volume of a proposal received after the time and date specified will cause the entire proposal to be late. Late proposals will not be considered for award, except under the following circumstances:

- 4.1 JPL determines that the late receipt was due solely to a delay by the U.S. postal service for which the offeror was not responsible. Timely postmark or receipt of registered, certified, or express mail "next-day service," establishing the time of deposit must be evidenced.
- 4.2 JPL determines that the proposal was late due solely to mishandling by JPL after receipt at JPL, provided that the timely receipt at JPL is evidenced.
- 4.3 No acceptable proposals are received in a timely manner.

**NOTE TO PROPOSERS:** If an emergency or unanticipated event interrupts normal JPL processes so that RFP responses cannot be received at the JPL office designated for receipt by the exact time specified in the RFP, and urgent JPL requirements preclude amendment of the RFP closing date, the time specified for receipt of proposals will be extended to the same time of day specified in the RFP on the first work day on which normal JPL processes resume.

#### 5.0 (THIS PARAGRAPH IS INTENTIONALLY LEFT BLANK)

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## 7.0 SOURCE EVALUATION AND SELECTION PROCESS

### 7.1 Source Evaluation.

Proposals will be evaluated in the areas as described in Section 9.0 below (Technical And Management Evaluation Criteria.) Although, cost will not be scored, cost is a substantial factor and is of approximately equal importance to the combined Technical/Management areas. JPL plans to make source selection based on the offeror whose proposal is determined to represent the best value to JPL. JPL's best value source selection is based on the following: If all offers, in the competitive range, are of approximately equal qualitative (technical and management) merit, JPL will select for negotiations the offer with the lowest cost. However, JPL may select for negotiations a contractor whose proposal offers a higher qualitative merit if the difference in cost is commensurate with added value. Conversely, JPL may select for negotiations a contractor whose proposal offers a lower qualitative merit if the cost differential between it and other offers so warrants. For purposes of this evaluation, JPL may use the proposed costs or the JPL-determined probable costs, as defined in paragraph 7.1.6 below. JPL will evaluate the proposals utilizing the following process:

- 7.1.1 Before issuing the RFP, JPL establishes specific criteria and their weighting for the evaluation. After receipt at JPL, the proposals are evaluated against the pre-set criteria outlined in the Technical/Management Criteria and Instructions.
- 7.1.2 An analysis of the supporting cost details is performed and the proposed costs are compared. If the Buy American Act, the Balance of Payments Program or rent free use of Government-furnished property applies, costs will be adjusted as required for the purpose of evaluation.
- 7.1.3 Responsibility (i.e., consideration of matters such as contractor financial capability, past performance record, adequacy of facilities, etc.) is assessed within the meaning of Federal Acquisition Regulation 9.1. Award will not be made to a Contractor deemed to be nonresponsible.
- 7.1.4 Competitive Range Determination
  - 7.1.4.1 Results of the initial proposal evaluation are used to determine which proposals are within the competitive range (i.e., those having a reasonable chance of being selected for award). Proposals determined not to be within the competitive range are eliminated from further consideration, and the proposers are notified accordingly.
  - 7.1.4.2 JPL may, at its discretion, conduct limited communications with one or more proposer(s) for the purpose of determining whether the proposer should be included in the competitive range. Such precompetitive range communications may be conducted to enhance JPL understanding of proposal(s) and may be used to:
    - 7.1.4.2.1 Validate the proposed price; and
    - 7.1.4.2.2 Clarify omissions, ambiguities and uncertainties in the proposer's supplemental business/cost information; and
  - 7.1.4.3 JPL reserves the right to make a competitive range determination without conducting such communications. Further, JPL, at its discretion, may waive minor informalities and minor irregularities in proposals received.

- 7.1.5 JPL may make source selection after the initial proposal evaluation or may conduct discussions with the proposers determined be within the competitive range. The purpose of the discussions is to assist the evaluators in fully understanding each proposal by:
  - 7.1.5.1 Discussing those aspects of each proposal which contain omissions, ambiguities and uncertainties;
  - 7.1.5.2 Verifying and identifying strengths and weaknesses which could affect work performance;
  - 7.1.5.3 Verifying the validity of the proposed cost; and
  - 7.1.5.4 Assessing the proposed personnel and the proposer's capabilities for performing the work.
- 7.1.6 After discussions, the initial evaluation findings are reviewed and may be revised to incorporate the results of the discussions to arrive at a final evaluation. This final evaluation includes completing a thorough assessment of the cost realism of each proposed cost estimate and comparing the cost estimates. In performing this assessment, JPL may develop a "probable cost" for each proposer. "Probable cost" is defined as JPL's best estimate of the cost of any contract that is most likely to result from the offeror's proposal. [NOTE: JPL will not request best and final offers (BAFOs).]

## 7.2 Selection Process.

The results of the final evaluation are submitted to the JPL Source Selection Official, who selects the Contractor(s) for negotiation. JPL reserves the right to reject all proposals, to award a contract based on initial proposals (without proposal clarifications) or conduct oral discussions prior to making source selection.

## 8.0 TECHNICAL AND MANAGEMENT EVALUATION CRITERIA

Listed below are the principle criteria and their relative importance for evaluating technology concepts and management approach for selection.

### 8.1 Criterion T1 - Technical Merit And Benefits To TPF Mission Architectures (40%):

Evidence of technical merit, and feasibility of technology concept to address currently unmet technical needs of one or both of the TPF mission architectures under development. Factors to be considered are:

- 8.1.1 Relevance, value, and benefits of the proposed technology concept toward meeting unresolved technology needs of one or both of the TPF architectures under development.
- 8.1.2 Potential for compatibility with and enabling or enhancing the performance of one of the TPF system testbeds.
- 8.1.3 Potential for providing the technical capability and performance needed by one or both of the TPF mission architectures.

### 8.2 Criterion T2 - Technology Maturation (40%):



Credibility of the proposed technology demonstration plan and the soundness of the approach for substantiating the predicted performance. Factors to be considered are:

- 8.2.1 Expected maturity of the technology at the end of the proposed effort and the strength of the evidence to show that this maturity is achievable, including how the current maturity has been derived or verified.
- 8.2.2 Soundness of the proposed technology development approach to assure successful technology demonstration by the end of the contract.
- 8.2.2 Adequacy of the testing planned to demonstrate that the hardware and/or software deliverables have indeed attained the required performance.

8.3 M1 - Management and Implementation Approach (20%):

Thoroughness and credibility of the proposed approach to implementation, including personnel experience, management structure, schedule realism, level of detail within the work breakdown structure and basis of cost estimate. Factors to be considered are:

- 8.3.1 Experience, contribution and commitment of the Principal Investigator, partner or team and organizational capability to deliver technology hardware/software.
- 8.3.2 Realism and reasonableness of the proposed cost and schedule to complete all proposed activities.
- 8.3.3 Historical performance for technology development and subsequent application

## 9.0 EXCEPTIONS TO GENERAL PROVISIONS AND ADDITIONAL GENERAL PROVISIONS

A large number of exceptions or one or more significant exceptions to the General Provisions and/or Additional General Provisions may make your proposal unacceptable for evaluation. **You must provide a detailed explanation, including the rationale, for any exceptions you take.** Proposers who submit proposals with exceptions may be selected for negotiations; however, if an agreement cannot be negotiated, your proposal may be rejected.

## 10.0 COST SHARING

If you elect, you may submit a cost sharing proposal. A cost sharing contract is a cost-reimbursement contract in which the contractor receives no fee and is reimbursed only for an agreed upon portion of its allowable costs. In a cost sharing contract, the contractor agrees to absorb part of the cost in the expectation of compensating benefits. Such benefits might include an enhancement of the Contractor's capability and expertise or an improvement of its competitive position in the commercial marketplace. These benefits may be accomplished through modification of the "non-technical" contract terms and conditions in a manner that would accomplish the Contractor's goals while still meeting the technical requirements of the effort. JPL reserves the right to reject alternate proposals if it is determined that the Contractor-requested compensating benefits are not in JPL's best interest.

## **VOLUME I: TECHNICAL TOPICS AND APPROACH**

### **1.0 INTRODUCTION**

The following topics and subtopics have been identified by the TPF project as areas of technology need for the development of one or both of the proposed TPF architectures. The list is not meant to be exhaustive, or intended to limit proposers to a specific set of technology items. Innovative technology concepts applicable to TPF may be proposed. A more thorough description of the TPF technology needs, with less detail of specific items, is given in Exhibit I [Technology Plan.] Proposers who choose to submit proposals for technology that are not on this list should refer to that document to ensure that they are not attempting to duplicate another technology development effort that is already under way in the TPF program.

### **2.0 TECHNICAL TOPICS**

2.1 Innovative technologies addressing the needs of and consequently enabling either the visible coronagraph or IR nulling architectures for the TPF mission.

2.2 Specific Visible Coronagraph Technology Topics:

- 2.2.1 Analyze, optimize and parameterize image and pupil plane masks considering: novel forms, material related effects, diffraction effects, phase and intensity effects, substrate interaction, material properties that will survive space environment, sensitivity to fabrication processes and coronagraph system performance including sensitivity to despace, decenter and tilt;
- 2.2.2 Pupil plane mask numerical generation tool that can be inserted into coronagraph end-to-end model;
- 2.2.3 Error bounds on wave propagation using scalar diffraction theory;
- 2.2.4 Effects of partial coherence in coronagraphic imaging.

2.3 Specific Technology Topics Relevant to the Visible Nulling Approach to Diffraction Suppression and Scattered Light Control:

- 2.3.1 Develop an out of band metrology for controlling the path length in the nulling interferometer by use of wavelength of light outside of the science wavelength band to measure the dept of the null fringe;
- 2.3.2 Develop a novel method of beam splitting to divide light in the two arms of the interferometer equally;
- 2.3.3 Develop an extremely coherent single mode fiber optic array with precision placement of each fiber;
- 2.3.4 Develop a deformable mirror architecture that controls tip/tilt/piston of discreet elements, each aligned with one subaperture.

2.4 Specific IR Interferometer Core Technology Topics:

- 2.4.1 Innovative, broadband materials and coatings for 7-20 micron beamsplitter and AR coating applications, which are cryo-compatible;
- 2.4.2 Alternative concepts for nulling beam combination that provide background suppression and that are robust to instrument instabilities;

- 2.4.3 Design and build of a symmetrical beamsplitter (amplitude division) with sufficiently symmetrical configuration to replace the dual beam splitter modified Mach-Zender approach with a single beam splitter in a given nuller setup;
- 2.4.4 Techniques for monitoring and control of pathlength (sub nanometer) and intensity (0.1%) through the interferometer optical beamtrain.
- 2.5 Specific Formation Flying Technology Topics:
  - 2.5.1 Development of long life, high Isp ( $> 200$  s), small minimum impulse bit ( $< 1$  mN $\cdot$ s) thrusters for precision control of formation-flying spacecraft, in particular with propellants that will not contaminate cold optical or thermal control surfaces on the spacecraft, or those formation control technologies not involving propellants;
  - 2.5.2 Large deployable thermal shields that are RF transparent (near Ka band) and opaque in the visible and mid IR (to 20  $\mu$ m);
  - 2.5.3 IR Stray light rejection and mitigation between spacecraft.
- 2.6 Specific Structurally Connected Interferometer Technology Topics:
  - 2.6.1 Modeling and prediction of the stability of deployed cryo structures, validated by experimental data, including precision latches and hinges;
  - 2.6.2 Cryo structures properties;
  - 2.6.3 Model verification techniques.

### 3.0 TECHNICAL APPROACH

The most important aspect of the proposal is the capability of the technology concept to meet the needs of the TPF mission as described in Exhibit I [Technology Plan.]. Accordingly, proposers should fully describe their technology system concept and demonstration activities so that reviewers can assess both the potential capabilities of the technology, and the likelihood for demonstrating its performance with hardware and software deliverables by the end of the period of performance. Therefore, the technical section should include a summary description of the proposed technology in the following order, including, **as applicable**:

- 3.1 Technical merit of the proposed technology relative to the TPF mission needs as described under Technical Topics [Volume I Section 2.0] and Exhibit I [Technology Plan];
- 3.2 Relationship of the proposed technology to TPF testbeds or other TPF efforts;
- 3.3 Functional block diagram;
- 3.4 Conceptual layout of system mechanical, electronic and optical components;
- 3.5 Conceptual flowcharts of software operation;
- 3.6 Interface geometries, schematics;
- 3.7 Physical characteristics, including size geometry, mass, power requirements;
- 3.8 Technical performance predictions with a discussion of how they have been calculated. Any applicable test results should be discussed. Description of technical performance should include quantitative performance metrics, how they will be met, major issues that may prevent their being met;

- 3.9 Description of the current maturity of the proposed technology and the technological maturity level expected at the end of the period of performance. Explain how these were derived;
- 3.10 Discussion of significant technical challenges to overcome;
- 3.11 Explanation of the technology development approach, including major technical milestones and any special materials, parts, processes, capital equipment, or subcontracts needed;
- 3.12 Description of the technology demonstration approach, with specific hardware and/or software deliverables, to substantiate the predicted performance.

## **VOLUME II – MANAGEMENT APPROACH**

### **1.0 INTRODUCTION**

This section shall summarize the management approach and the facilities and equipment required. The management approach should describe essential management functions and be appropriate to the size of the proposed effort. Proposals that include teaming arrangements, partnering and/or contributions to meet the technology development / demonstration objectives shall specifically address how the proposed team will interrelate internally and with NASA, both organizationally and managerially. The capabilities that each member organization brings to the team, as well as previous experience with similar systems and equipment shall also be addressed.

### **2.0 MANAGEMENT APPROACH**

The management section should include the following, in the order listed, as applicable:

- 2.1 Approach for managing technology development activities including details of the proposed tasks, a schedule, and the proposed organizational structure;
- 2.2 Basis and justification for the cost and schedule estimates for the proposed activities;
- 2.3 Principal Investigator's historical experience, performance, and institutional capability in the area of technology development and subsequent application.
- 2.4 Expected contribution/commitment by the Principal Investigator and his/her parent organization to the proposed technology development effort (include cost and resource sharing, partnering arrangements, etc.);
- 2.5 Identify the roles and responsibilities for each participating organization and key individuals;
- 2.6 Approach for securing any proposed technology development collaborations;
- 2.7 Assumed funding contributions by technology development collaborations or partnering arrangements with other individuals or organizations not included in the proposed funding.

### **VOLUME III: COST INSTRUCTIONS**

This portion of the proposal instructions outlines the requirements to be followed in preparing the cost proposal.

#### **1.0 DATA SUBMITTAL**

Provide the applicable data requested in paragraphs 1.1 and 1.2 below. Note that if any of the current information requested below has been previously submitted to JPL, resubmittal is not necessary; simply reference the applicable JPL RFQ or RFP number under which the data was submitted.

- 1.1 Provide the cost breakdown information requested on Attachment A-19, "Cost Elements Breakdown (Short Form)." Proposers may provide the requested information, as applicable, on an alternate computer generated form.
- 1.2 You are required to provide the following information subsequent to the submission of your proposal, if requested by the JPL Negotiator. This information must be received by JPL within 5 working days from the date of the request for the information to be further considered. Failure to provide this information in a timely manner may result in the elimination of the proposal from further consideration.
  - 1.2.1 For proposals greater than \$550,000, a Contract Pricing Proposal Cover Sheet, signed by the proposer's authorized representative, stating.
    - 1.2.1.1 The RFP number, proposed cost and total;
    - 1.2.1.2 Whether your organization is subject to cost accounting standards (CAS);
    - 1.2.1.3 Whether your organization has submitted a CASB Disclosure Statement, and if it has been determined adequate;
    - 1.2.1.4 Whether you have been notified that you are or may be in noncompliance with your Disclosure Statement or CAS, and, if yes, an explanation;
    - 1.2.1.5 Whether any aspect of this proposal is inconsistent with your disclosed practices or applicable CAS, and, if so, an explanation; and
    - 1.2.1.6 Whether the proposal is consistent with your established estimating and accounting principles and procedures and FAR Part 31, "Cost Principles," and, if not, an explanation.
  - 1.2.2 The cost information requested in paragraphs 2 and 3 below, as applicable. (**NOTE:** If the price of a purchased item is based on adequate price competition as defined in FAR Part 15, the cost elements supporting data addressed in paragraph 3 is not required for that item.)
  - 1.2.3 If your proposal exceeds \$550,000, the cost or pricing data requested below must be certified in accordance with Attachment B-10, "Certificate of Current Cost or Pricing Data," upon contract negotiation, unless an exception applies. If any exception per Attachment B-13, "Claims for Exceptions to Cost or Pricing Data," is applicable, you must submit a written request in accordance with Attachment B-13 to qualify for an exception to the requirement for submission of cost or pricing data.
  - 1.2.4 For each individual item included in the proposal for which the price exceeds \$550,000 and is based on catalog or market prices, or prices set by law or regulation, a written request for an exception to the submission of certified cost or pricing data in accordance with Attachment B-13, "Claims for Exceptions to Cost or Pricing Data,"

is required. If an item is subject to an exception but is priced at less than or equal to \$500,000, state the basis of the price and provide appropriate reference documentation; a written request for an exception is not required. The cost elements supporting data addressed in paragraph 3 below is not required on any item for which an exception applies.

- 1.2.5 A letter authorizing the release of rate and other relevant information to the Jet Propulsion Laboratory.

## 2.0 PROPOSAL PRICING

DO NOT submit the information requested below with your proposal. It will be subsequently required only at the request of the JPL Negotiator.

- 2.1 Submit the cost information requested under item 5.0 below, summarized by cost element and time phased by month. Labor should be proposed by work hour not work month. This information should be submitted using Attachment A-15, "Cost Elements Breakdown," or your computer generated equivalent. If possible, include a copy of the data on a 3.5-inch computer diskette or cd-rom in an Excel or Excel-compatible format (e.g., Lotus 1-2-3, Quattro Pro, Microsoft Works, Dbase, etc.). If the proposal includes separate phases or options, a time-phased summary must be submitted for each.
- 2.2 (THIS PARAGRAPH INTENTIONALLY LEFT BLANK)
- 2.3 (THIS PARAGRAPH INTENTIONALLY LEFT BLANK)

## 3.0 COST ELEMENTS SUPPORTING DATA

DO NOT submit the information requested below with your proposal. It will be subsequently required only at the request of the JPL Negotiator.

- 3.1 Direct Labor.
  - 3.1.1 Explain the basis of the labor-hour estimates by classification. Show all calculations in detail, including the development of any factored hours and the base to which the factor is applied.
  - 3.1.1 Discuss the development of the labor rates, including all escalation factors. Include a summary rate table by classification and lowest fiscal distribution (i.e., by quarter if rates change quarterly). If available, submit evidence of Government approval of direct labor rates for each labor classification.
- 3.2 Material.
 

Submit a breakdown of raw materials and purchased parts, including: basis of estimates, part number, description, quantity, unit price, extended price, and source of supply. Describe any pricing factors proposed, such as scrap, rework, and usage.
- 3.3 Subcontracts.
 

Identify each effort to be subcontracted. List the selected subcontractor's name, location, amount proposed and type of contract. Explain any adjustment made to the subcontractor's proposed costs. Describe the cost or price estimates for each subcontract.
- 3.4 Other Direct Costs.
  - 3.4.1 Travel and Relocation.

- 3.4.1.1 Indicate the destination, duration and purpose of each trip proposed. Detail the development of each cost element included in the per trip cost.
- 3.4.1.2 Submit current company policy regarding the reimbursement of travel relocation costs and the accounting of such costs as a direct or indirect expense.

#### 3.4.2 Special Tooling and Special Test Equipment.

- 3.4.2.1 Special Tooling and Special Test Equipment are defined in JPL form entitled "Management of Government Property in the Possession of Contractors." Describe each item of Special Tooling and Special Test Equipment you proposed; explain how it meets the definition referenced above; indicate where and when each item is to be used and the extent of usage.
- 3.4.2.2 Explain the Basis of Estimate and furnish supporting data for each item of Special Tooling and Special Test Equipment in accordance with the requirements of the paragraphs entitled "Direct Labor," "Material" and "Subcontracts" above.

#### 3.4.1 Computer Usage.

Describe the proposed computer usage, extent of usage, rate(s), and the total cost. Explain the development of the rate(s).

#### 3.4.4 Consultants.

Indicate the specific task requiring consultant services. Identify the proposed consultants, state the proposed hourly/daily rate, the estimated number of hours/days, and any associated costs (such as travel). State whether the consultant has been compensated at the quoted rate for similar services performed in connection with Government contracts.

#### 3.4.1.2 Licensing and Royalty Information.

If your proposal contains costs for royalties or licenses, indicate the amount and be ready to furnish details.

#### 3.4.1.3 Other.

Explain and support any additional other direct costs included in the proposal.

### 3.5 Indirect Costs.

- 3.5.1 Discuss the development of each proposed indirect expense rate (e.g., labor overhead, material overhead, off-site burden, general and administrative [G&A]). Specifically identify the cost elements included in the base to which each rate is applied. List the indirect expense rates experienced for the past two years. Explain any significant variance between the experienced and proposed rates. Submit evidence of Government approval of each indirect rate, if available.
- 3.5.2 Identify separately any independent research and development expenses included in the G&A rate.

## 4.0 COST SHARING

If you elect to submit a cost sharing proposal, such a proposal may be submitted in addition to a



basic proposal or in lieu thereof. Please note that all proposers are required to submit complete cost information for the full requirement, and indicate which part of the effort is to be funded by the Contractor and which part is to be funded by JPL.

**5.0 (THIS PARAGRAPH IS INTENTIONALLY LEFT BLANK)**

**6.0 (THIS PARAGRAPH IS INTENTIONALLY LEFT BLANK)**

**7.0 (THIS PARAGRAPH IS INTENTIONALLY LEFT BLANK)**

**8.0 SUPPLEMENTAL BUSINESS/COST INFORMATION**

**8.1 Financial Statement.**

Submit a copy of your annual financial statements for the last three years and any information regarding additional resources required to perform the proposed effort, such as an established line of credit or other financial resource

**8.2 Royalties.**

If your proposal contains costs for royalties, indicate the amount and be ready to furnish details.

**8.3 Accounting Calendar.**

The proposer will furnish its accounting calendar for each year in which work is anticipated.

**8.4 Attachments**

The Section of this RFP entitled "Attachments" consists of those forms and documents containing information applicable to this RFP. Group A Attachments must be completed and attached to your cost proposal. Group B Attachments consist of forms and documents for informational purposes only and can be accessed via the electronic address provided below. Hard copies of the Group B Attachments will be mailed by request only. Note that the Group B Attachments are very important and may be required under the Contract.

**9.0 MULTIPLE AWARDS**

**9.1 Multiple awards.**

There may be multiple awards as a result of this RFP.



## ATTACHMENTS TO THE RFP

The following attached forms and documents are organized into two major groupings:

1. Group A must be completed and returned as part of your quotation or proposal.
2. Group B are for information purposes only in preparing your quotation/proposal.

***NOTE TO PROPOSERS:*** Forms and documents listed below are not applicable unless the box preceding the Attachment Number is marked ☒.

**GROUP A - Complete and return as part of your quotation/cost proposal, as applicable:**

Attachment Number	Title and Form Number
<input checked="" type="checkbox"/> A-1	Acknowledgment A-1 (form JPL 2384)
<input checked="" type="checkbox"/> A-2	Cost Accounting Standards (form JPL 2842)
<input type="checkbox"/> A-3	Government Property Questionnaire (form JPL 0544)
<input type="checkbox"/> A-4	(RESERVED)
<input checked="" type="checkbox"/> A-5	Acknowledgment A-5 (form JPL 2384-3)
<input type="checkbox"/> A-6	Notice of Total Small Business Set-Aside (form JPL 4022)
<input type="checkbox"/> A-7	Notice of Total Small Business Set-Aside - Modified (form JPL 4023)
<input type="checkbox"/> A-8	(RESERVED)
<input type="checkbox"/> A-9	(RESERVED)
<input type="checkbox"/> A-10	(RESERVED)
<input type="checkbox"/> A-11	(RESERVED)
<input type="checkbox"/> A-12	Foreign Acquisitions - Certification of Eligibility for Exemption from/Certain JPL General Provisions, Additional General Provisions, and Certifications (form JPL 2881)
<input type="checkbox"/> A-13	(RESERVED)
<input type="checkbox"/> A-14	Past Performance (form JPL 0358)
<input type="checkbox"/> A-15	Cost Element Breakdown (form JPL 0549)
<input type="checkbox"/> A-16	Determination of Lowest Overall Price - Time-and-Material Proposals (form JPL 0359)
<input type="checkbox"/> A-17	Determination of Lowest Overall Price - Labor Hour Proposals (form JPL 0363)
<input type="checkbox"/> A-18	Determination of Lowest Overall Price - Labor-Hour Proposals to JPL-Provided Rate Ranges (form JPL 0364)
<input checked="" type="checkbox"/> A-19	Cost Elements Breakdown (Short Form) (form JPL 0549-1)

### **GROUP B - For information only:**

Attachment Number	Title and Form Number
<input checked="" type="checkbox"/> B-1	Waiver of Rights to Inventions (form JPL 62-301)
<input type="checkbox"/> B-2	Summary Work Breakdown Structure (no form number)
<input type="checkbox"/> B-3	Notice to Offerors (form JPL 2843)
<input type="checkbox"/> B-4	Instructions for Patent Agreement for Use in Support Service Contracts (form JPL 2844) Patent Agreement (form JPL 1929)
<input type="checkbox"/> B-5	Notice of Requirement of Pre-award On Site Equal Opportunity Compliance Review (form JPL 3553)
<input checked="" type="checkbox"/> B-6	Requirements for A Subcontracting Plan (form JPL 0294)
<input type="checkbox"/> B-7	Security Requirements for a Classified Contract (form JPL 2891)
<input type="checkbox"/> B-8	Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity(Executive Order 11246) (form JPL 2899)
<input type="checkbox"/> B-9.1	Notice to Prospective Contractors of Requirement for an Environmental Audit of the Lease Facilities (form JPL 2896)
<input type="checkbox"/> B-9.2	Notice to Prospective Contractors of Requirement for an Environmental Audit of the Lease Facilities – Alternate (form JPL 2896-1)
<input checked="" type="checkbox"/> B-10	Certificate of Current Cost or Pricing Data (form JPL 2496)
<input type="checkbox"/> B-11	Standards of Conduct and Procedures for Handling Contractor Personnel Problems, Discipline, and Separation (form JPL 4412)
<input type="checkbox"/> B-12	(RESERVED)
<input checked="" type="checkbox"/> B-13	Claims for Exceptions to Cost or Pricing Data (form JPL 2703)
<input checked="" type="checkbox"/> B-14	Billing Instructions – Cost Type Contract (form JPL 2716)

- ☒ B-15 Billing Instructions – CREI Contract (form JPL 2717)
- ☐ B-16 Billing Instructions – Labor-Hour/Time-and-Material Contract (form JPL 2718)
- ☐ B-17 JPL Contractor Safety and Health Notification (form JPL 2885)